

## SOCIETIES AND ACADEMIES.

## LONDON.

**Entomological Society**, October 18.—Dr. T. A. Chapman, vice-president, in the chair.—Mr. H. **Rowland-Brown** exhibited series of *Erebias* taken this year in the Pyrenees, including *Erebia lefebvrei*, with the varieties *pyrenaica*, Obth., from Mt. Canigou, E. Pyrenees, and var. *intermedia*, Obth., from Gavarnie. He also showed for comparison *E. glacialis* var. *nicholli*, from Campiglio, which at one time was supposed to be identical with *lefebvrei*, then considered to be the Pyrenean form of *E. melas*; specimens of *E. gorgone* and *E. gorge* from the Lac de Gaube, Cauterets, and from Gavarnie; and a short series of *Lycaena orbitulus* from the Central Alps, *L. orbitulus* var. *oberthuri*, Stgr., *L. pyrenaica*, and *L. pheretes* from the Brenner and Cortina districts. It was remarked that there seemed to be a greater superficial affinity between *pyrenaica* and *pheretes* (not reported from the Pyrenees) than between *pyrenaica* and *orbitulus*.—Mr. E. C. **Bedwell** exhibited eight specimens of *Apion laevigatum*, Kirby, one of the rarest indigenous Apions, found on August 31, sheltering under plants of *Echium vulgare* in the Lowestoft district.—Mr. R. **Shelford** showed a Ligæid bug, the fore-limbs of which were remarkably well adapted to fossorial habits and comparable with those of the mole cricket; a Brenthid beetle with a deep channel running along the dorsal part of the prothorax and occupied by achiari; and an Anthribid beetle with a crescentic sulcus on the prothorax. All the specimens were from British North Borneo.—Mr. C. J. **Gahan**, on behalf of Mr. C. O. Waterhouse, exhibited a living example of *Phaneroptera quadripunctata*, which species had been found in some numbers in a viney near Chester.—Mr. W. J. **Kaye** brought for exhibition a long variable series of *Heliconius numata* from the Potaro River, British Guiana, clearly proving that these very variable forms were only aberrations, and not a subspecies, at least in this locality.—Mr. A. H. **Jones** exhibited a collection of Lepidoptera made by him in Majorca during the first half of last June, and remarked upon the great scarcity of lepidopterous life in the island. Only thirteen species of butterflies were observed, all of the commonest kinds and without any indication of variation, with about six species of moths (all occurring in Britain), including *Agrotis saucia*, *Acidalia ochrea*, and *A. degeneraria*, the latter, interesting in point of colour, being much redder. Mr. Jones also exhibited *Melanargia lachesis* var. *canigulensis* from Le Vernet, showing on the under side in the males a strong resemblance to *M. galathea*, and *Melitaea aurinia* var. *iberica*, Obth., from Montserrat, near Barcelona, and a melanid specimen of *Erebia stygne*, taken by Mr. R. S. Standen last June at St. Martin du Canigou, Le Vernet.—Mr. F. P. **Dodd** communicated a paper on a parasitic Lepidopteron from Queensland, Australia.—Commander J. J. Walker read a paper by Mr. E. G. R. **Meade-Waldo** on a collection of butterflies and moths made in Morocco, 1900–01–02. The species enumerated included a *Cænonympha* and a *Satyrus* new to science. But for so luxuriant a country as that visited it was remarkable how few butterflies and moths were observed.

**Royal Microscopical Society**, October 18.—Dr. Dukinfield H. Scott, F.R.S., president, in the chair.—An old Wilson screw-barrel simple microscope, date about 1750, presented by Major Meade J. C. **Dennis**. The secretary traced the history of microscopes' focusing by means of a screw cut on the body-tube from Campani in 1686, Grindl in 1687, Bonanni in 1691, Hartsoeker in 1694, to Wilson in 1702, who was followed by Culpeper somewhere before 1738 and Adams in 1746.—A simple portable camera for use with the microscope: E. **Moffat**. The arrangement comprised a vertical telescopic standard, drawing out to 28 inches, having a clamp at the lower end for securing it to the edge of a table. At the upper end was fixed a mahogany board  $\frac{1}{4}$  inch thick by 4 inches by 5 inches, hinged at the pillar so as to close up, and having a hole in the centre about 3 inches in diameter. There were two spring clips for securing the dry plate while making the exposure, and guides for keeping it in position horizontally. The back of the dry plate was covered by a piece of cardboard painted dead black, the spring clips

referred to pressing upon this card. Depending from the board was a tapered bag of black Italian cloth about 17 inches in length, with a rubber ring at the lower end to secure the covering to the eye-piece of the microscope. The apparatus can be closed up into a space 5 inches by 9 inches by  $1\frac{1}{2}$  inches, and will go into a large pocket or knapsack. The weight, if made of aluminium, should not exceed  $1\frac{1}{2}$  lb. It will work well up to 700 diameters, and can be made in brass for 21s. Aluminium would cost more.—A form of hand microtome devised and used by Mr. **Flatters**. The microtome was made of brass, having the tube 3 inches deep and 1 inch diameter inside. The spindle had twenty-eight threads to the inch, and had a notched disc at the lower end, acted on by a spring stop the tension of which could be adjusted. Three discs were supplied, permitting sections being cut of 1/2000 to 1/1200 inch in thickness for each notch that the disc was turned. The knife-plate was made of hardened brass, the aperture on the under side being of the same diameter as the tube, but somewhat less on the upper side to prevent the specimen turning.—The Finlayson "comparascope": Messrs. R. and J. **Beck**. The president said they had the instrument before them some time ago in a less developed form; it seemed likely to be extremely useful to microscopists, as it could be applied to any microscope, and afforded a ready means of comparing objects directly under conditions which rendered it possible easily to detect slight differences.—Notes on aragotite, a rare Californian mineral: Prof. Henry G. **Hanks**. The mineral, which is a hydrocarbon, was first described by Mr. F. E. Durand in a paper read by him before the California Academy of Sciences on April 1, 1872. It was not until 1893 that Prof. Hanks obtained specimens of the mineral. These he subjected to various experiments, and disputes Mr. Durand's conclusion that it might be some modification of idrialite. He gives a table showing that in chemical composition, colour, streak, hardness, and specific gravity aragotite differs from idrialite.

## PARIS.

**Academy of Sciences**, October 25.—M. Troost in the chair.—Some facts concerning the history of emulsin; the general existence of this ferment in the Orchidaceæ: L. **Guignard**. The examination of various parasitic plants showed the constant presence of emulsin; it would appear that there is a constant relation between the presence of this ferment and parasitism. On further work, however, this was not found to be the case, since a careful examination of *Orobancha Galii* and *O. Epithymum* gave no emulsin. Numerous plants of the Orchidaceæ, both indigenous and exotic, proved to have emulsin in their aerial and subterranean roots.—On the decapod Crustacea collected by the yacht *Princesse Alice* in the course of the voyage of 1905: E. L. **Bouvier**.—Report on a memoir of M. Bachelier on "continued probabilities": H. **Poincaré**.—Observation of the eclipse of the sun of August 30: F. **Jehl**. The observations were made at the Observatory of Aosta (Italy) under excellent atmospheric conditions, and included the times of contacts, visual observations of the spectrum, and temperature changes.—On discontinuous groups: Frédéric **Riesz**.—Researches on gravitation: V. **Crémieu**. The experiments described show the possibility of carrying out the Cavendish experiment in a liquid. Full details of the arrangement of the apparatus are given, but the publication of the results is reserved for a later paper.—On the specific inductive power of benzene and water: F. **Beaulard**. L. Grætz and L. Fomm have pointed out the existence of a phenomenon of polarisation which is in contradiction with the fundamental hypothesis of Poisson-Mossotti, and this relation has been utilised by the author as the basis of his method of measurement. The specific inductive powers thus found were 1.657 for benzene and 11.04 for water.—On the specific heat of solutions of copper sulphate: P. **Vaillant**. The solutions were heated by an incandescent lamp, the current and electromotive force being measured directly. If the specific heat of solution be regarded as the sum of that of the solid copper sulphate and water, negative values are obtained, but this is not the case if the substance in solution be regarded as  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ . Even on this assumption constant values are not obtained for the specific heat, and several possible explanations are put forward.—

On the composition of the hydrochloroferric colloid as a function of the amount of HCl in the liquid: G. **Malfitano**.—On some aromatic ethylene oxides: MM. **Fourneau** and **Tiffeneau**. A study of the conditions under which the ethylene oxides tend to pass over into aldehydes.—New researches on the development of green plants: Jules **Lefèvre**. The author's experiments lead to the same conclusion as those of Moll and Cailletet, if carbonic acid is absorbed by the roots it is not utilised by the plant.—An analysis of some anthropometric measurements of men and women of the gipsies: Eugène **Pittard**.—Serotherapy in cases of bleeding: Émile **Weil**. In the cases known as "bleeders," in which a slight wound continues to bleed, it is shown that this effect is due to a property of the blood itself. This disease can be remedied by the injection of normal human or bovine serum. Details are given of the cure of one case, who, on the twenty-fifth day after the last injection, for the first time in his life, had a tooth removed with only the normal loss of blood.—The distribution of fine sediment on the bed of the ocean: J. **Thoulet**.

#### NEW SOUTH WALES.

**L nnean Society**, August 30.—Mr. T. Steel, president, in the chair.—Crustacea dredged off Port Jackson in deep water: F. E. **Grant**. Six species of Malacostraca were taken, of which four species, referable to the genera Hyastenus, Cymonomops, Latreillopsis, and Paguristes, are described as new. Of the remaining two species, *Ebalia tuberculosa* and *Ibacus alticrenatus*, only the former has previously been recorded as belonging to our fauna.—Notes on Prosobranchiata, No. 4, the ontogenetic stages represented by the gastropod protoconch: H. Leighton **Kesteven**. The present contribution is a continuation of the writer's attempts to unravel the puzzles presented by the gastropod protoconch. He finds that he is able to define four stages of growth represented, and supposes an "ideal" protoconch to be composed of (1) the "plug" of the primitive shell gland; (2) a portion formed by the veliger; (3) a portion formed during the nepionic stage; and finally (4) a portion formed during early neanic stages.—On a new species of Eucalyptus from northern New South Wales: J. H. **Maiden**. This is a large white gum, much resembling the blue gum (*E. saligna*) when growing, and the timber of which is specially esteemed. Its timber, however, as compared with that of *E. saligna*, is white from the sap to the heart. Its closest affinity appears to be with *E. Deanei*, Maiden.—A gelatin-hardening bacterium: R. Greig **Smith**. The bacterium was isolated from the tissues of *Schinus molle*, which was exuding a turquoise coloured gum-resin. When it was grown upon ordinary glucose gelatin, the medium became deep brown in colour, and was not liquefied when heated to the boiling point of water. Tannin, formaldehyde, or oxidising enzymes could not be detected.—On the supposed numerical preponderance of the males in Odonata: R. J. **Tillyard**. Reasons are given for concluding that the ratio of the numbers of the sexes in the dragon-flies or Odonata is a ratio of equality. The idea of the preponderance of the males, suggested largely by the examination of collections, and voiced from time to time by naturalists, has not been confirmed by experience in rearing a large number of nymphs of *Lestes leda*.

### DIARY OF SOCIETIES.

THURSDAY, NOVEMBER 2.

CHEMICAL SOCIETY, at 8.30.—Solution and Pseudo-solution, part iv., Some of the Arsenious Properties of Arsenious Sulphide and Ferric Hydrate: E. Linder and H. Picton.—The Molecular Conductivity of Water: P. Blackman.—The Stereoisomerism of Substituted Ammonium Compounds: H. O. Jones.—The Influence of very Strong Electromagnetic Fields on the Spark Spectra of Ruthenium, Rhodium, and Palladium: J. E. Purvis.—Note on the Fluorides of Selenium and Tellurium: E. B. R. Prideaux.—The Constitution of Glutaconic Acid: J. F. Thorpe.—Some Alkyl Derivatives of Glutaconic Acid and of 2:6-Dioxypyridine: H. Baron and J. F. Thorpe.—Note on the Formation of  $\beta$ -Methylglutaconic Acid and of  $\alpha\beta$ -Dimethylglutaconic Acid: F. V. Darbishire and J. F. Thorpe.

LINNEAN SOCIETY, at 8.—Plant Ecology, interpreted by Direct Response to the Conditions of Life: Rev. G. Henslow.

NO. 1879, VOL. 73.]

RÖNTGEN SOCIETY, at 8.15.—The Ruhmkorff Coil: Prof. Wertheim-Salomonsen.

CIVIL AND MECHANICAL ENGINEERS' SOCIETY, at 8.—Sea Defences: Baron H. T. H. Siccama.

FRIDAY, NOVEMBER 3.

GEOLOGISTS' ASSOCIATION, at 8.—Conversazione.

MONDAY, NOVEMBER 6.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—Introductory Remarks: The President, Sir George D. T. Goldie, K.C.M.G., F.R.S.—Travels in the Mountains of Central Japan: Rev. Walter Weston.

SOCIETY OF CHEMICAL INDUSTRY, at 8.—Evaporation *in vacuo* of Solutions containing Solids: Dr. J. Lewkowitsch.

WEDNESDAY, NOVEMBER 8.

GEOLOGICAL SOCIETY, at 8.

THURSDAY, NOVEMBER 9.

MATHEMATICAL SOCIETY, at 5.30.—Annual General Meeting.—The Continuum and the Second Number-class: G. H. Hardy.—On the Arithmetical Nature of the Coefficients in a Group of Linear Substitutions of Finite Order (second paper): Prof. W. Burnside.—On the Asymptotic Value of a Type of Finite Series: J. W. Nicholson.—On an Extension of Dirichlet's Integral: Prof. T. J. I'A. Bromwich.—(1) On Improper Multiple Integrals; (2) On the Arithmetical Continuum: Dr. E. W. Hobson.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Inaugural Address: John Gavey, C.B.

FRIDAY, NOVEMBER 10.

ROYAL ASTRONOMICAL SOCIETY, at 5.

PHYSICAL SOCIETY, at 8.

MALACOLOGICAL SOCIETY, at 8.—(1) Descriptions of New Species of Drymaeus, Amphicyclotus, and Neocyclus from Central and South America; (2) Description of a New Species of Achatina from Mashonaland: S. I. Da Costa.—On a Collection of Land and Freshwater Shells from Sumatra with Descriptions of New Species, part i.: Rev. R. Ashington Bullen. On a New Species of Oliva: F. G. Bridgman.—On the Anatomy of *Ensis macha* and *Solen fonsii* and *S. viridis*: H. H. Bloomer.

### CONTENTS.

PAGE

Two Text-Books on Mechanics. By M. . . . .	1
Induced Radio-Activity. . . . .	2
Garden Cities . . . . .	2
Our Book Shelf:—	
Dunstan: "Elementary Experimental Chemistry" . . . . .	3
Step: "Wayside and Woodland Blossoms" . . . . .	3
Brightwen: "Quiet Hours with Nature" . . . . .	4
Classen: "Sammlung Schubert, XLII." . . . .	4
Karsten and Schenck: "Vegetationsbilder" . . . . .	4
Letters to the Editor:—	
Remarkable Coelenterata from the West Coast of Ireland.—Prof. Sydney J. Hickson, F.R.S. . . . .	
Action of Radium on Gelatin Media.—John Butler Burke . . . . .	5
Border occasionally seen between Light and Dark Regions on Photographic Prints.—Sir Oliver Lodge, F.R.S. . . . .	5
Terminology in Electro-physiology.—(With Diagram.)—Dr. David Fraser Harris. . . . .	5
The Engineer's Unit of Force.—D. J. Carnegie; The Reviewer . . . . .	6
Prof. Lankester's "Extinct Animals." (Illustrated.) . . . .	6
Astronomy and Meteorology in Australia. By W. N. S. . . . .	8
Ferdinand Baron von Richthofen. By A. G. . . . .	8
The Treasury and Men of Science . . . . .	9
The British Science Guild . . . . .	10
Notes . . . . .	13
Our Astronomical Column:—	
Astronomical Occurrences in November . . . . .	17
Wave-lengths of Silicon Lines . . . . .	17
Report of the Yerkes Observatory . . . . .	18
Observations of Jupiter's Sixth Satellite . . . . .	18
The Spectrum of Nova Persei No. 2 . . . . .	18
Reduction Tables for Equatorial Observations . . . . .	18
Photographic Star Catalogue . . . . .	18
Geography at the British Association . . . . .	18
The Chelsea Power Station. (Illustrated.) By Richard F. Chaffer . . . . .	20
Replicas of Diffraction Gratings . . . . .	21
University and Educational Intelligence . . . . .	22
Societies and Academies . . . . .	23
Diary of Societies . . . . .	24